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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,965	09/08/2006	Karlfried Pfeifenbring	103513-010802	8652
67395 7590 07/08/2010 GREENBERG TRAUIG, LLP 200 PARK AVE. P.O. BOX 677 FLORHAM PARK, NJ 07932				
EXAMINER				
LAVILLA, MICHAEL E				
ART UNIT		PAPER NUMBER		
1784				
NOTIFICATION DATE		DELIVERY MODE		
07/08/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/539,965

Applicant(s)

PFEIFENBRING ET AL.

Examiner

MICHAEL LA VILLA

Art Unit

1784

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2010.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-8 and 10-16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 3-8 and 10-16 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

2. Arrangement of the Specification

3. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:
 - (a) TITLE OF THE INVENTION.
 - (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
 - (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
 - (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
 - (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
 - (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
 - (g) BRIEF SUMMARY OF THE INVENTION.
 - (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
 - (i) DETAILED DESCRIPTION OF THE INVENTION.
 - (j) CLAIM OR CLAIMS (commencing on a separate sheet).
 - (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
 - (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

4. Claims 4 and 11 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Regarding Claim 4, the tubes are described as being "copper-nickel" whereas previous Claim 1 refers to "copper tubes". Should "copper tubes" not encompass "copper-nickel tubes," the claim scope in Claim 4 would fail to further limit previous Claim 1. Furthermore, Claim 4 describes a "copper coating," whereas previous Claim 1 demands a nickel coating. Hence, Claim 4 would appear to not further limit since the coating cannot both be a nickel coating and a copper coating. Claim 11 describes a "copper bath," whereas previous Claim 5 demands a nickel coating. Hence, Claim 11 would appear to not further limit previous Claim 5 since a copper bath would not produce a nickel coating.

5. Claims 4, 11, and 12 are objected to because of the following informalities:

Regarding Claims 4, 11, and 12, the proper abbreviation "wt." should be used for the word "weight." Regarding Claim 12, the parenthetical "(Monel)" is objected to for being superfluous. The claimed subject matter is seemingly the same and definite without this parenthetical. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:
7. The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 5-8, 10, and 14-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding Claim 5, the original disclosure teaches that nickel coatings are provided on copper tubes. See Specification (page 8, lines 6-10). While an example of nickel coating on Monel 400 is provided of a poor bonding configuration, the Specification does not appear to teach providing nickel coatings on any other tube materials. Hence, it is unclear how there is support for generically claimed tube materials, not limited to "copper tubes" and/or "copper/nickel tubes."
9. Claims 1, 3, 4, and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding Claim 1, the Specification teaches that the final article contains virtually no nickel at the interface of the coolant channel tubes and the cast alloy. See Specification (page 9, line 3). Thus, applicant has failed to teach how the final article would contain nickel layer on the outer side of the copper tubes of the coolant channels. Since applicant teaches that such nickel layer would not be present and since the

prior art does not otherwise teach how it can be accomplished without undue experimentation, the claimed subject matter is not enabled.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

11. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1, 3, 4, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13. Regarding Claim 1, with respect to Claim 4, it is unclear whether a "copper-nickel" tube is a type of 'copper tube." By virtue of the claim dependency and a broad interpretation of the phrase, "copper tube" may be considered to encompass "copper-nickel tube", but applicant distinguishes these tubes in the Specification and characterizes them as being distinct types.

14. Regarding Claim 1, it is unclear what is meant by the phrase "provided with an electrodeposited nickel coating on their outer side." It is unclear whether this language describes the structure of the tube in the cooling element or whether it constitutes product-by-process language describing how the tubes are prepared prior to casting.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

16. A person shall be entitled to a patent unless –

17. (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

20. Claims 1, 3, 4, and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McRae USPN 6,280,681. McRae teaches cooling elements formed of copper/nickel tube, which may be a copper tube material encompassed by Claim 1 and Claim 4, in a copper casting alloy. While McRae does not teach that a nickel layer is applied to the tube, applicant teaches that there is no nickel layer present on the coolant channel tube after cooling of the cast. See Specification (page 9, line 3). Hence, it would be expected that the resulting article of McRae is indistinguishable or substantially indistinguishable from an article formed by first nickel plating since the copper/nickel tube material already contains nickel. To the extent that Claim 4 actually requires copper coating, this feature is also taught since the tube of

McRae also contains copper, as does the casting alloy, and so no structural or compositional feature would be expected to be present in the claimed article that is not present in McRae.

Response to Amendment

21. In view of applicant's amendments and arguments, applicant traverses the objection to the Specification, the claim objections, the section 112, second paragraph rejections, the section 102/103 rejection over Outokumpu Oy, the section 103 rejection over Outokumpu Oy, the section 103 rejection over Outokumpu Oy in view of McRae, and the section 103 rejection over Outokumpu Oy in view of McRae in view of Kuo of the Office Action mailed on 6 October 2009. Rejections are withdrawn.
22. Certain claims previously indicated as being allowable over the prior art are no longer viewed as being allowable over the reviewed prior art for the reasons set forth in the prior art rejections above.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LA VILLA whose telephone number is (571)272-1539. The examiner can normally be reached on Monday through Friday.
24. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil, can be reached on (571) 272-1540. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/MICHAEL LA VILLA/
MICHAEL LA VILLA
Primary Patent Examiner, Art Unit 1784
5 July 2010**